CLAIMS:

1. A network device for managing addresses to be assigned to users of an IP network, the network device comprising:

at least one queue for holding released addresses;

the network device configured to:

detect that a packet has been addressed to a released address held in the at least one queue; and

return the held address to which the packet has been addressed to an end of the at least one queue.

2. The network device according to claim 1, further configured to:

detect that an address of a user has been released; and

add the released address to the end of the at least one queue.

3. The network device according to claim 2, further configured to:

classify the released address into a group out of at least two address groups, each address group of the at least two address groups having its own queue holding released addresses; and

add the released address to an end of the queue of the classified group, the queues being given a priority order for re-assigning the released addresses held in the queues.

4. The network device according to claim 1, further configured to:

upon detection that a packet has been addressed to the released address held in the at least one queue, send an error notification to a source of the packet.

5. The network device according to claim 1, wherein the network device is configured to detect that a packet has been addressed to the released address held in the at least one queue by receiving the packet addressed to the released address.

6. The network device according to claim 2, wherein the network device is configured to detect that an address of a user has been released by detecting a loss of a connection which releases its address.

7. The network device according to claim 1, wherein the network device is configured to detect that a packet has been addressed to the released address held in the at least one queue by receiving an error notification indicating an unused address.

8. The network device according to claim 2, wherein the network device is configured to detect that an address of a user has been released by receiving a notification thereon.

9. A network device for forwarding IP data packets, the network device configured to:

receive a packet addressed to an unused address; and

send an error notification to a network node for managing addresses, the error notification indicating the unused address.

10. The network device according to claim 9, wherein the error notification causes a return of a released address held in a queue and corresponding to the unused address to an end of the queue, the queue holding released addresses.

11. The network device according to claim 9, further configured to:

detect a loss of a connection which releases its address; and

send a notification about the released address to the network node for managing addresses.

12. The network device according to claim 9, further configured to:

upon receipt of the packet addressed to the unused address, send an error notification to a source of the packet.

13. A system for managing addresses to be assigned to users of an IP network, comprising:

a first network node for managing addresses, the first network node comprising:

at least one queue for holding released addresses;

the first network node configured to:

detect that a packet has been addressed to a released address held in the at least one queue; and

return the held address to which the packet has been addressed to an end of the at least one queue; and

a second network node for forwarding IP data packets, the second network node configured to:

receive a packet addressed to an unused address; and

send an error notification to the first network node, the error notification indicating the unused address.

14. A method of managing addresses to be assigned to users of an IP network, the method comprising the steps of:

detecting that a packet has been addressed to a released address held in a queue holding released addresses; and

returning the held address, to which the packet has been addressed, to an end of the queue.

15. A method of forwarding IP data packets, the method comprising the steps of:

receiving a packet addressed to an unused address; and

sending an error notification to a network node for managing addresses, the error notification indicating the unused address.

16. The method according to claim 15, wherein the step of sending the error notification further comprises causing a return of a released address held in a queue and corresponding to the unused address to an end of the queue, the queue holding released addresses.

17. A computer program embodied on a computer-readable medium comprising software code portions for performing steps of:

detecting that a packet has been addressed to a released address held in a queue holding released addresses; and

returning the held address, to which the packet has been addressed, to an end of the queue.

18. The computer program according to claim 17, further comprising a computer-readable medium on which the software code portions are stored.

19. The computer program according to claim 17, wherein the computer program product is configured to be directly loadable into an internal memory of the computer.